

JOELLEN L. RUSSELL

United States Citizen. Born in Seattle, WA, December 15, 1970.

EDUCATION

- 1999 University of California, San Diego. Ph.D. in Oceanography from Scripps Institution of Oceanography. Dissertation title is “The Biogeochemistry of Southern Ocean Intermediate and Mode Waters.”
- 1993 Harvard University. BA in Environmental Geoscience from the Department of Earth and Planetary Sciences. Thesis title is “Applying Geology to Atmospheric Research: Modern Analogs to Archean Paleosols.”

RESEARCH

- 2002- Research Scientist, Program in Atmospheric and Oceanic Sciences, Princeton University.
- 1999-02 Postdoctoral Research Associate, Joint Institute for the Study of Atmosphere and Ocean, University of Washington.
- 1993-99 Graduate Student Researcher, Scripps Institution of Oceanography, University of California, San Diego.

FIELD WORK

- 1998 Physical Properties Specialist, Great Australian Bight, Ocean Drilling Program, Leg 182, R/V JOIDES Resolution.
- 1998 Carbon Chemistry, Southeast Indian Ocean, CSIRO, R/V Franklin.
- 1995 Dissolved Oxygen, Southeast Pacific Ocean, SIO, R/V Melville.

TEACHING

- 2004 Visiting Instructor, “Climate Science” (4 credit lecture/laboratory course), Stone Child College, Rocky Boy's Indian Reservation, Box Elder, MT.
- 1997 Visiting Lecturer in Environmental Science, Stone Child College, Rocky Boy's Indian Reservation, Box Elder, MT.
- 1993-99 Teaching Assistant, “Intro. To Earth Science” and “Intro to Oceanography”, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA.
- 1993 Teaching Fellow, “Marine Chemistry”, Harvard University, Boston, MA.

AWARDS

- (pending) National Science Foundation proposal (0526146), “Does the position of the Southern Ocean Westerly Winds represent a negative feedback on anthropogenic carbon dioxide?”
- 2005-08 Principal Investigator, NOAA Office of Global Programs (GC05-146), “Optimal network design to detect spatial patterns and variability of ocean carbon sources and sinks from underway surface CO₂ measurements.”
- 1999-01 USSAC-funded research proposal, “Glacial-Interglacial Ventilation Changes in the Southern Ocean.”
- 1997-98 Whole Earth Society Research Grant, Scripps Institution of Oceanography.
- 1997 American Geophysical Union Travel Grant, IAMAS/IUGG Meeting.
- 1995 Chair’s Fund Award, Chemical Oceanography, Gordon Research Conference.
- 1989-93 Radcliffe National Scholar, Harvard University.
- 1992-93 Ford Foundation Research Grant, Harvard University.
- 1990 Exxon Research Grant, Bermuda Biological Station for Research.

SERVICE

- 2000 Chaired Session, Southern Ocean Fluxes: Impact on Climate III, Ocean Sciences Meeting, San Antonio, Texas
- 1993-97 Member, Chancellor’s Advisory Committee on the Status of Women.
- 1995-97 Member, Graduate Student Council, Scripps Institution of Oceanography.
- 1996-97 Member, Women’s Center Advisory Board.
- 1996-97 Treasurer, Whole Earth Society.

PUBLICATIONS

- Russell, J.L., & J.M. Wallace (2004), Annual carbon dioxide drawdown and the Northern Annular Mode, *Global Biogeochem. Cycles*, **18**, GB1012, doi:10.1029/2003GB002044.
- Russell, J.L. & A.G. Dickson (2003), Variability in oxygen and nutrients in South Pacific Antarctic Intermediate Water, *Global Biogeochem. Cycles*, **17**(2), 1033, doi:10.1029/2000GB001317.
- Hine, A.C., D.A. Feary, M.J. Malone, and the Leg 182 Shipboard Party (1999) Research in the Great Australian Bight Yields Exciting Early Results, EOS Transactions, American Geophysical Union, 80, #44, Nov. 2, 1999, pp. 521, 525-526.
- Russell, J.L., A. Gnanadesikan & J.R. Toggweiler, Impact of Westerly Wind Position on the Circulation of the Southern Ocean. *J. Climate*, submitted.
- Delworth, T.L., et al., GFDL's CM2 Global Coupled Climate Models – Part 1: Formulation and Simulation Characteristics. *J. Climate*, accepted.
- Gnanadesikan, A, et al., GFDL's CM2 global coupled climate models-Part 2: The baseline ocean simulation. *J. Climate*, submitted.
- Toggweiler, J.R., J.L. Russell & S.R. Carson, The Mid-Latitude Westerlies, Atmospheric CO₂, and Climate Change during the Ice Ages, *Paleoceanography*, submitted.
- Russell, J.L., & J.M. Wallace, Fire and ENSO-Related Variability in the Rate of Increase of Atmospheric Carbon Dioxide. *Global Biogeochem. Cycles*, submitted..
- Russell, J.L., & P.J. Goodman, Climate-Driven Changes in the Ventilation of Subantarctic Mode Water, *Paleoceanography*, in revision.
- Russell, J.L., K. Dixon, A. Gnanadesikan, R. Stouffer & J.R. Toggweiler, Does the position of the Southern Ocean Westerly Winds represent a negative feedback on anthropogenic carbon dioxide? Manuscript in preparation.
- Goodman, P.J., & J.L. Russell, The Transport of Heat and Carbon by Southern Ocean Intermediate and Mode Waters. Manuscript in preparation.

PROFESSIONAL PRESENTATIONS

- Russell, J. and J.M. Wallace (2005) Fire and Interannual Variability in the Carbon Cycle. GFDL, Princeton, New Jersey.
- Russell, J. and J.R. Toggweiler (2004) Westerly Winds over the Southern Ocean determine the partition of CO₂ between atmosphere and ocean. AGU Fall Meeting, San Francisco, California.
- Russell, J. and J.R. Toggweiler (2004) Invited. Changes in Westerly Winds Caused Glacial-Interglacial CO₂ Changes. Goldschmidt Conference, Copenhagen, Denmark.
- Russell J. and J.M. Wallace (2004) Annual Carbon Dioxide Drawdown and the Northern Annular Mode, Ocean Sciences Meeting, Portland Oregon.
- Russell J. and J.M. Wallace (2003) Interannual Variability in Atmospheric Carbon Dioxide and ENSO, Joint EGS-AGU Conference, Nice, France.
- Russell, J. and J.M. Wallace (2003) Interannual Variability in Atmospheric Carbon Dioxide and ENSO, GFDL, Princeton, New Jersey.
- Russell J. (2002) Invited, Intermediate and Mode Water Links between the Southern Ocean and the North Atlantic Thermohaline Overturning, Princeton University, Princeton, New Jersey.
- Russell J. (2001) Invited, Residual Wintertime Effects on Atmospheric CO₂, NOAA/CMDL, Boulder, Colorado.
- Russell J. (2001) Invited, Using Tracers in an OGCM to Understand the Effect of Intermediate and Mode Waters on the Global Thermohaline Circulation, Lamont-Doherty Earth Observatory, Columbia University, Palisades, New York.
- Russell J. (2000) Invited, Ventilation of the Great Australian Bight on Glacial-Interglacial Timescales, ODP Leg 182 Post-Cruise Meeting, Copenhagen Denmark.
- Russell J. (2000) The Role of the Southern Ocean Shallow Overturning Circulation in the Global Carbon Cycle, Atmospheric Science Department Colloquium, Seattle, Washington.

- Russell J. (2000) Comparison of Antarctic Intermediate Water and Southeastern Indian Subantarctic Mode Water Formation and Carbon Transport. Ocean Sciences Meeting, San Antonio, Texas.
- Russell J. (1999) Invited, Modern Formation Processes for Fossil Brines in the Great Australian Bight. Goldschmidt Conference, Harvard University, Cambridge, Massachusetts.
- Russell J. (1999) Invited, Carbon and Oxygen Transport in Southern Ocean Intermediate and Mode Waters. Department of Earth System Science University of California at Irvine, Irvine, California.
- Russell J. (1998) Invited, Processes Affecting the Carbon Cycle in the Great Australian Bight. Southeast Indian Ocean and Great Australian Bight USA /Australia Bilateral Workshop, Port Lincoln, Australia.
- Russell J. & A.G. Dickson (1997) Assessing the Effect of Variability in the Composition and Formation Processes of Antarctic Intermediate Water on the South Pacific Oxygen Maximum. IAPSO / IUGG Joint Assembly, Melbourne, Australia.
- Russell J. & A.G. Dickson (1996) Estimating Variability in the Export of Oxygen from the Southern Ocean. EOS Trans. Am. Geophys. Union 77, No. 46, suppl. p. F408.
- Russell J. & A.G. Dickson (1996) Coulometric Standardization of a Semi-Automated Winkler Titration for Dissolved Oxygen. EOS Trans. Am. Geophys. Union 72, No.35, suppl. p. E274.